

What is claimed is:

1. A power transmission chain comprising a plurality of links each possessing through-holes, and a plurality of pins inserted through the through-holes for interconnecting the plural links; used as entrained between a first pulley possessing conical sheave surfaces and a second pulley possessing conical sheave surfaces; and operating to transmit power by way of contact between opposite end faces of the pins and the sheave surfaces of the first and second pulleys,

wherein all the plural pins substantially have the same length in the longitudinal direction thereof, while the plural pins include plural types of pins which have mutually different rigidities against force acting in the longitudinal direction thereof.

2. A power transmission chain comprising a plurality of links, and a plurality of pins for interconnecting these links; used as entrained between a first pulley possessing conical sheave surfaces and a second pulley possessing conical sheave surfaces; and operating to transmit power by way of contact between opposite end faces of the pins and the sheave surfaces of the first and second pulleys,

wherein all the plural pins substantially have the same length in the longitudinal direction thereof, while the plural pins include plural types of pins which have mutually different sectional shapes or sectional areas as determined on section perpendicular to the longitudinal direction thereof.

3. A power transmission chain according to Claim 1 or 2, wherein each of the plural pins substantially has the same sectional shape and sectional area as determined at any points of the overall longitudinal length thereof,

while the plural pins include plural types of pins which have the mutually different sectional areas.

4. A power transmission chain according to any one of Claims 1 to 3, wherein the plural pins include plural types of pins, the sections of which have mutually different widths with respect to a chain longitudinal direction, whereas the plural links include plural types of links which have mutually different pitches, and

wherein a link having the greater pitch is penetrated by a pin having the greater width with respect to the chain longitudinal direction.

5. A power transmission chain according to any one of Claims 1 to 4, wherein out of the plural types of pins which have the mutually different sectional areas, a sectional area of the thickest pin is 1.1 times or more and twice or less the sectional area of the thinnest pin.

6. A power transmission chain used as entrained between a first pulley possessing conical sheave surfaces and a second pulley possessing conical sheave surfaces and operating to transmit power by way of contact between opposite end faces of plural chain friction transmission members and the sheave surfaces of the first and second pulleys, the chain friction transmission members arranged along a chain longitudinal direction at predetermined space intervals,

the chain comprising a plurality of links each possessing first and second through-holes arranged in the chain longitudinal direction, and a plurality of first pins and a plurality of second pins, each of which penetrates the first through-hole of one link and the second through-hole of the other link thereby interconnecting the links, adjoining in a chain

widthwise direction, in a manner to provide bending in the chain longitudinal direction, wherein the first pin fixed in the first through-hole of the one link and movably fitted in the second through-hole of the other link and the second pin movably fitted in the first through-hole of the one link and fixed in the second through-hole of the other link are brought into relative movement in rolling contact thereby permitting the bending of the chain, and wherein a locus of contact position between the first pin and the second pin is defined by an involute of a circle and the first pins and the second pins are combined to form two or more types of pairs which provide the involutes of base circles having different radii, and

wherein the plural chain friction transmission members include plural types of chain friction transmission members which have mutually different rigidities against force acting in the chain widthwise direction.

7. A power transmission chain according to Claim 6, wherein all the chain friction transmission members substantially have the same length in the longitudinal direction thereof.

8. A power transmission chain according to Claim 6 or 7, wherein the plural chain friction transmission members include plural types of chain friction transmission members which have mutually different sectional shapes or sectional areas as determined on section perpendicular to the chain widthwise direction.

9. A power transmission chain according to any one of Claims 6 to 8, wherein the first pin or the second pin is a transmission pin also serving as the chain friction transmission member.

10. A power transmission chain according to Claim 9, wherein the

plural transmission pins include plural types of transmission pins which have mutually different chain-longitudinal widths as determined on section perpendicular to a pin-longitudinal direction, and wherein the plural links include plural types of links which have mutually different pitches.

11. A power transmission assembly comprising:

a first pulley possessing conical sheave surfaces;

a second pulley possessing conical sheave surfaces; and

a power transmission chain entrained between the first and second pulleys,

wherein the power transmission chain comprises one set forth in any of Claims 1 to 10.